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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/715,797

11/18/2003

Steve Golden

CSI-2009C1

5178

33931 7590 11/14/2007  
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EXAMINER

WOO, JULIAN W

ART UNIT

PAPER NUMBER

3773

MAIL DATE

DELIVERY MODE

11/14/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/715,797

Applicant(s)

GOLDEN ET AL.

Examiner

Julian W. Woo

Art Unit

3773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 64,66-81 and 123-141 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 77-81 is/are allowed.
- 6) ☒ Claim(s) 64,66-75,124-127,129-132,135-137 and 139-141 is/are rejected.
- 7) ☒ Claim(s) 76,123,128,133,134 and 138 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 64, 124, 125, 127, and 129-131 are rejected under 35 U.S.C. 102(e) as being anticipated by Swanson et al. (6,113,612). Swanson et al. disclose, at least in figures 7-11 and in col. 6, line 28 to col. 7, line 34 and col. 14, lines 31-45; a method for performing an anastomosis on a vessel wall, while maintaining blood flow within the vessel, where the method includes positioning a cannula (110) or a tubular member with first and second ends, so that it extends through a vessel wall (300), the cannula or tubular member being introduced (i.e., inserted) or delivered into the vessel wall from the interior of the vessel (i.e., radially and axially expanded into the vessel wall or deflated and moved proximally away from the interior of the vessel) or passing the first end of the tubular member (i.e. radially and axially expanding into the vessel wall) from the interior of the vessel through the vessel wall at a first vessel wall location; attaching a graft (120) to the vessel wall adjacent to the cannula while the cannula (in its inflated state or during its withdrawal from the vessel wall opening) extends through the vessel wall or adjacent to the first end of the tubular member, and removing the cannula or

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tubular member, where the tubular member is delivered endovascularly through the vessel (during its insertion and withdrawal), and where the tubular member from an area of hemostasis (e.g, at its inflation within the vessel wall).

3. Claims 66-74, 126, 132, 135-137, and 139-141 are rejected under 35 U.S.C. 102(e) as being anticipated by LeMole (5,893,369). LeMole discloses, at least in figures 5-9A and 12A-13 and in col. 5, line 34 to col. 8, line 35; a method for performing an anastomosis on a vessel wall while maintaining blood flow within the vessel (12), where the method includes forming an opening in the blood vessel (see figs. 6 and 7 or 12E) and removing a portion of the wall where the opening was formed (see fig. 8 or 12F), inserting an occluding member into the opening (38 or 302), anastomosing a graft (14) to the vessel, piercing the vessel wall with an anchor member (34 or 306), cutting the opening around the anchor member with a cutting tool (32 or proximal portion of 302), removing a tissue plug produced by the cutting prior to inserting an occluding member (see fig. 8 or 13F), inserting the occluding member (302) into the opening cut into the vessel while the cutting tool is still in the opening, withdrawing the cutting tool to allow the occluding member to expand against the periphery of the opening, placing a graft (14) over the occluding member prior to anastomosing, sliding a generally circular centering disk (30) along the anchor member onto the vessel wall prior to cutting and clamping vessel wall tissue between the centering disk and an end portion of the anchoring member, removing the clamped vessel wall between the centering disk and a portion of the piercing member, where anastomosing comprises fastening walls of the graft and vessel together using fasteners (24), where the occluding member comprises

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a cannula (304), where the occluding member (302) is radially expandable or inflatable and has an expandable membrane or flexible sealing member, where the occluding member forms an umbrella (see fig. 12C), and where the method includes a restraining sheath (30E).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. Claim 75 is rejected under 35 U.S.C. 103(a) as being unpatentable over LeMole (5,893,369) in view of Ho et al. (6,514,265). LeMole (5,893,369) discloses the invention substantially as claimed, but do not disclose fastening with self-closing fasteners. Ho et al. teach, at least in figures 2A –3G and in col. 5, line 62 to col. 6, line 13 and col. 8, lines 9-42, fastening the walls of a graft and a vessel together using self-closing fasteners (210). It would have been obvious to one having ordinary skill in the art at the time the invention was made, in view of Ho et al., to modify the method of LeMole, so

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that self-closing fasteners are applied for the fastening of a graft to a vessel. Such fasteners would allow a quick (as compared to the time for fastening with sutures or conventional clips), safe, and effective anastomosis of a graft and a vessel within the narrow confines of a surgical site.

***Allowable Subject Matter***

6. Claims 77-81 are allowed.

7. The following is an examiner's statement of reasons for allowance: None of the prior art of record, alone or in combination, discloses, a method from performing an anastomosis on a vessel wall, where the method includes, inter alia, inserting an occluding member into an opening cut into a vessel, and anastomosing a graft to the vessel at the opening, where the occluding member includes fasteners with attached needles attached to the occluding member, where the method further includes grasping the needles and pulling them entirely through the vessel wall; and where a cutting tool includes an adapter that retains needles, where the method includes inserting the cutting tool and adapter into the vessel and pulling back the adapter and cutting tool in order to pierce the vessel wall with the needles, and pulling the needles all the way through the vessel.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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8. Claims 76, 123, 128, 133, 134, and 138 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter: None of the prior art of record, alone or in combination, discloses a method for performing an anastomosis on a vessel wall while maintaining blood flow within the vessel, where the method includes, inter alia, positioning a cannula or tubular member, so that it extends through a vessel wall; forming an opening in a wall of the vessel and inserting an occluding member into the opening, where occluding member includes fasteners and needles coupled thereto, where the cannula or tubular member is passed through another portion or a second location of the vessel wall and into the interior of the vessel, where the occluding member comprises a plurality of wires of memory shape, and where the occluding member comprises a plurality of expansion members and a membrane between expansion members.

As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

***Response to Amendment***

10. Applicant's arguments filed on August 20, 2007 have been fully considered but they are not fully persuasive: See the new and restated grounds of rejection above.

The arguments regarding the restriction requirement set forth in the Office action of December 11, 2006 are persuasive, and the election of species requirement (for claims 64-81) is hereby withdrawn.

The rejection of claims based on the reference of Popov et al. is hereby withdrawn.

With respect to arguments regarding the rejection of claims based on the reference of Swanson et al.: Swanson et al. indeed disclose a cannula (110) that is introduced into the vessel wall from the interior of the vessel, where the term "introduced" is given its broadest reasonable interpretation: e.g., inserted into or expanded within. Moreover, the deflation and withdrawal of the cannula or tubular member from the interior of the vessel allows completion of the anastomosing process (the attaching of the graft to the vessel wall), where a flow path between graft and the vessel is formed.

With respect to arguments regarding the rejection of claims based on the Lemole reference: LeMole indeed discloses forming an opening in the vessel wall before and during anastomosing a graft to the vessel at the opening. That is, forming the opening completes the anastomosing process by forming a flow path between the graft and the vessel.

### ***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP



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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian W. Woo whose telephone number is (571) 272-4707. The examiner can normally be reached Mon.-Fri., 7:00 AM to 3:00 PM Eastern Time, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jackie Ho can be reached on (571) 272-4696. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

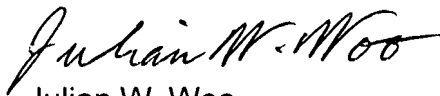
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, reading "Julian W. Woo". The signature is written in a cursive, flowing style.

Julian W. Woo  
Primary Examiner

November 5, 2007